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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,643	10/31/2003	William A. DeCormier	87326.3680	8473

7590 11/01/2004  
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EXAMINER

HAM, SEUNGSOOK

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 11/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/697,643

Applicant(s)

DECORMIER ET AL.

Examiner

Seungsook Ham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Oath/Declaration***

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The date of signature is missing (Jeffrey M. Brown).

### ***Claim Objections***

Claim 9 is objected to because of the following informalities: "said third rectangular waveguide flange" lacks antecedent basis (it appears that claim 9 should be dependent on claim 2 instead of claim 1). Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 12, lines 3, 10, and 11, "a first-filter, first-resonator" is confusing as to whether it refers to "a first-filter and first-resonator";

Line 6, "said first-filter baffle" lacks antecedent basis;

Line 8, "the aperture" lacks antecedent basis.

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In claim 16, lines 3, 10, and 11, "a second-filter, first-resonator" is confusing as to whether it refers to "a second-filter and first-resonator";

Line 6, "said second-filter baffle" lacks antecedent basis;

Line 8, "the aperture" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-6, 8, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramsey et al. (US '266).

Ramsey et al. (fig.10) discloses a waveguide directional filter comprising: a first rectangular waveguide section 22; a first elliptic filter section 27, 28 (the resonators near the ports a and c) ported to the first rectangular waveguide section at a substantially perpendicular angle with a common electrical-signal axis; a second elliptic filter section 28, 27 (the resonators near the ports b and d) ported to the first rectangular waveguide section at a substantially perpendicular angle and substantially parallel to the first elliptic filter section with an electrical-signal axis parallel to the first elliptic filter section; and a second rectangular waveguide section 21 affixed and terminating the first and second elliptic filter sections.

Regarding claims 3-6 and 8, Ramsey et al. also discloses the rectangular waveguide sections has TE<sub>10</sub> propagation mode and describes directional filter operation (see columns 3 and 4 in relations to figures 8 and 10).

Regarding claims 19-22, it is inherent from the device of Ramsey et al. that the directional filter is function as a combiner (i.e., demultiplexer) or a separator (i.e., multiplexer) since Ramsey et al. teaches using the directional filter as a multiplexer or demultiplexer (see col. 6).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 7, and 9-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramsey et al. (US '266) in view of Tong (US '920).

Ramsey et al. is applied as above. Ramsey et al. lacks the specific structures of the first and second elliptic filter sections. It should be noted that Ramsey et al. discloses first and second elliptic filter sections having a plurality of circular waveguide resonators 27, 28. Tong (fig. 1) discloses a plurality of elliptic filter sections 4, 6, 8, 10, each filter section having a first filter resonator 14, a plurality of successive first filter resonators (as one desires, col. 3, line 60 – col. 4, line 9) and a final first-filter resonator 16. Moreover, the first and final filter resonators having baffles (where the T-junction 46 and the end cavity 50 meets), coupling iris 48, 20 and tuning probes 28.

It would have been obvious to one of ordinary skill in the art to use the elliptic filter section of Tong as the first and second elliptic filter sections in the device of Ramsey et al. since both elliptic filter sections are functionally equivalent.

Moreover, providing flanges at both ends of first and second rectangular waveguide sections is considered as an obvious modification since such design technique is well known in the art (see Tong, the waveguide 12 has flanges 52 at both ends).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kich et al. (US '694) discloses a quasi-elliptic directional filter; and


Marie (US '430 and US '988) and Cohn (US '123) disclose a directional filter.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (571) 272-2405. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Seungsook Ham  
Primary Examiner  
Art Unit 2817

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